



**SHERWIN-WILLIAMS.**

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October 31, 2007

Mr. Ray Klimcsak  
U.S. Environmental Protection Agency – Region 2  
290 Broadway 19<sup>th</sup> Floor  
New York, New York 10007-1866

RE: Response to USEPA Comments  
Evaluation of Strategic Sampling Results – Bridgewood Lake and the Rail Road Site (August 9, 2006)  
AOC Index Number: No. II CERCLA-02-99-2035  
Gibbsboro Borough, Voorhees Township and Lindenwold Borough, New Jersey

Dear Mr. Klimcsak:

The Sherwin-Williams Company (SWC) is responding to the U.S. Environmental Protection Agency's (USEPA) comments, dated June 11, 2007, of the August 9, 2006 *Evaluation of Strategic Sampling Results – Bridgewood Lake and the Rail Road Site* submitted by SWC pursuant to Administrative Order Index No. II CERCLA-02-99-2035. The USEPA comments also included comments from the New Jersey Department of Environmental Protection Agency (NJDEP).

For ease of review, we have included the USEPA's and NJDEP's specific comments followed by SWC response.

**USEPA General Comments:**

Throughout the data evaluation, there are instances when the term "screening criteria" means the action level for comparison. Other times, it appears to also include the background level for an analyte. For example:

- Page 2, second sentence of the Rail Road Site Soil Sampling results (section), it is stated that, "the majority of the soil samples collected contained no constituents at concentrations greater than screening criteria, or in the case of arsenic, greater than background levels (8.0 mg/kg).

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### **SWC Response**

SWC acknowledges the comment. The terms "screening criteria" and "screening criterion" were within different portions of the August 9, 2006 document to refer to both the risk-based screening criteria and the constituent-specific background concentrations. Future documents will specify the screening criteria and background concentrations.

### **USEPA General Comments:**

- Page 6, third bullet, it is stated that, "samples obtained in the railroad bed...contained no constituents at concentrations above screening criteria." However, arsenic was detected in these two borings at concentrations ranging from 0.89 to 2.0 mg/kg, which is above its action level for soils (0.4 mg/kg) but below its background level.

The term "screening criteria" should be used consistently throughout the document.

### **SWC Response**

SWC acknowledges the comment. The sentence should have read "samples obtained in the railroad bed...contained no constituents at concentrations above screening criteria or, in the case of arsenic, background levels." Future documents will specify either the screening criteria or background levels.

### **USEPA Bridgewood Lake Sediment Comments**

1. USEPA does not agree with the statement that characterization of Bridgewood Lake sediments have been achieved/performed and that no additional characterization of these sediments is needed at this time. In fact, in many instances the vertical extent of sediment contamination was not achieved along the specific transects, nor at each sediment sampling location. Additionally, the Sherwin-Williams Company August 29, 2005, Field Change Request Form (FCRF) "FCRF #11 – Bridgewood Lake Protocol for Sediment Sampling at Depth" originally presented a sediment sampling protocol in which sampling depths would be based on sediment composition (e.g., fine-grained silty sediment versus coarser-grained sand and silt). The rationale for this protocol was that the contamination would only be present in the fine-grained silty sediment and not the coarser-grained sand/silt; however, since the x-ray fluorescence (XRF) sampling protocol was not being implemented for field screening (analysis) at that point, it was not apparent that contamination crossed these boundaries until after the confirmatory data had been received. USEPA is, therefore, requesting that additional vertical delineation sediment sampling be proposed to fully characterize the extent of vertical contamination. These samples should be analyzed for inorganics.

### **SWC Response**

SWC acknowledges the comment. The statement regarding the adequacy of the characterization of the sediment in Bridgewood Lake referred to the soft organic-rich sediment that was the focus of the Bridgewood Lake investigation, not the consolidated coarser-grained sand and silt underlying the soft organic-rich sediment. Based on the data that have been collected, the nature and extent of constituents of potential concern (COPCs) in the fine-grained material have been adequately characterized. However, as discussed further in this response, SWC acknowledges that additional characterization of the consolidated coarser-grained sand and silt is needed, and is proposing to conduct this investigation.

The Bridgewood Lake investigation scope of work was based on the presumption that COPCs would be present either primarily or exclusively in the soft organic-rich sediment, and that the underlying consolidated coarser-grained sand and silt would not contain COPCs at concentrations above either screening criteria or background levels. This presumption was based on two considerations:

- 1) The COPCs in Bridgewood Lake sediment were most likely transported to the lake from an up stream source via White Sands Branch in either particle or dissolved-phase form. If transported in particle form, it would be predicted that the majority of the mass would be as fine particles since coarser, heavier particles would settle out prior to the lake.
- 2) Most of the COPCs in Bridgewood Lake sediment will preferentially partition to the organic carbon fraction of the sediment, which would be much higher in the soft organic-rich sediment than in the consolidated coarser-grained sand and silt. Therefore, the majority of the dissolved-phase COPCs transported to the lake would also be present in the soft organic-rich sediment.

SWC acknowledges, however, that the data collected during the Bridgewood Lake investigation did not completely confirm the validity of the presumption that COPCs will be primarily or exclusively in the soft organic-rich, sediment since the data set was limited. Therefore, as discussed in the responses to the specific comments, Sherwin-Williams proposes to return to select locations in Bridgewood Lake to collect samples from the underlying consolidated coarser-grained sand and silt.

### **USEPA Bridgewood Lake Sediment Comments**

- Page 3, second paragraph, (Bridgewood Lake Transects) Soil and Sediment Results, it is stated that metals were found in the "high organic content sediment", and no elevated concentrations were present in the "coarse-grained material" beneath. However, there are no geologic soil/sediment descriptions provided in the data evaluation to substantiate this statement. The deeper samples collected in the lower portion of the lake (generally downstream of the "neck" were substantially less contaminated than the upper interval samples. However, in the upper portion of the

lake (specifically the eastern portion of transect BWL10; the middle of the transect BWL14; and transects BWL16, BLW19, and BWL20), the surface and subsurface samples were present at concentrations approximately equivalent in magnitude and over the screening criteria. Please clarify if these deeper samples were still collected in the "high organic content sediments" and provide a explanation of the samples (by location and depth) that are considered to be of the "coarse-grained material".

### **SWC Response**

The statement in question was based on: 1) the data from the samples that, based on location, sampling interval, total organic carbon (TOC) levels and solids percentage measurements, were obtained primarily from the consolidated coarser-grained sand and silt; and 2) a qualitative comparison of the observed metals concentrations with the measured TOC levels (an indicator of the composition of the sample). As stated above, however, it is acknowledged that the evidence supporting this statement is not conclusive, and, as discussed in the response to Comment 2, additional samples of the consolidated coarser-grained sand and silt will be collected and analyzed.

Three attachments, one figure and two tables, have been prepared to assist USEPA in understanding the characteristics and composition of the sediment samples collected in from the various depths at each sampling location within each BWL transect:

- Figure 1 presents cross-sections of each of the Bridgewood Lake transects. Included in the cross sections are the individual sediment borings, the depths at which the fine-grained material was encountered, the depths at which the consolidated coarser-grained sand and silt was encountered, and the depths at which each individual sample was collected. Analytical results for arsenic, lead, total organic carbon, and percent solids are also presented below the cross-sections.
- Tables 1 and 2 provide a comparison of the total organic carbon (TOC) and percent solids measurements with the arsenic and lead concentrations found in each sample location. It is noted that lead and arsenic are not the only COPCs found at concentrations greater than screening levels in Bridgewood Lake sediment, but they are the most widespread COPCs and are provided for illustration purposes.

The cross sections presented on Figure 1, show that 6 samples from the 0.0-0.5 ft interval, BWDD-0001, BWDD-0002, BWDD-0003, BWDD-0011, BWDD-0032, and BWDD-0037, were obtained partially from the consolidated coarser-grained sand and silt. Based on the sample logs, sample BWDD-0058, not presented on the cross-sections because it was not taken along a transect, was also collected partially from the coarser-grained sand and silt.

The results for most parameters analyzed for in BWDD-0037 were rejected as a result of the very low percent solids (8.2%) in this sample. Therefore, although noted on the cross-sections as a sample that was collected partially from the consolidated coarser-grained sand and silt, the percent solids measurement and the qualified analytical

results eliminate this data point as representative of the consolidated coarser-grained sand and silt.

As presented in the table below (excerpted from Table 1), the TOC levels in four of the remaining six samples (BWDD0001, BWDD0002, BWDD0003 and BWDD0011), which are identified as being collected partially from the consolidated coarser-grained sand and silt, support the conclusion that the samples also contained a large component of the soft organic-rich sediment. Although the TOC levels are not as high as samples collected exclusively in the soft organic-rich sediment, which ranged from approximately 90,000 mg/Kg to 250,000 mg/Kg, the TOC levels measured in BWDD-0001, BWDD-0002, BWDD-0003 and BWDD-0011 were substantially higher than those in BWDD-0032 and BWDD-0058, which are considered more representative of the consolidated coarser-grained sand and silt.

Sample ID	TOC (mg/Kg)	% Solids
BWDD0001-SD-AA-AB-0	28,900	37.8
BWDD0002-SD-AA-AB-0	45,000	33.1
BWDD0003-SD-AA-AB-0	19,500	53.5
BWDD0011-SD-AA-AB-0	53,100	32
BWDD0032-SD-AA-AB-0	3,610	83.5
BWDD0037-SD-AA-AB-0	6,100R	8.2
BWDD0058-SD-AA-AB-0	1,480	85.5

The percent solids measurements provide an additional line of evidence to evaluate the composition of each sample, since the soft organic-rich sediment would be predicted to contain a lower level of solids than would the consolidated coarser-grained sand and silt. Reviewing the percent solids measurements in the samples shown on the cross sections to have been obtained partially from the bottom of the lake provides a similar observation to that of the TOC comparison: samples from location BWDD-0001, BWDD-0002, BWDD-0003 and BWDD-0011 have higher solids contents than those in samples collected solely from the organic-rich soft organic-rich sediment (typically in the 12% - 20% range), but not as great as those from either BWDD-0032 or BWDD-0058 (greater than 80 percent). This also supports the conclusion that the first four samples were a combination of soft organic-rich sediment and consolidated coarser-grained sand and silt.

Based on this analysis, it has been concluded that both BWDD0032 and BWDD0058 were collected either primarily or exclusively from the consolidated coarser-grained sand and silt. As presented in Table 3 of the August 9, 2006, neither BWDD0032-SD-AA-AB nor BWDD0058-SD-AA-AB contained any COPCs at concentrations greater than screening criteria. These results, although from a limited data set, provide support for the presumption that the consolidated coarser-grained sand and silt does not contain significant concentrations of COPCs. This will, of course, need to be verified with additional samples from this consolidated material.

Tables 1 and 2 provide a more qualitative level of support for the presumption that significant concentrations of COPCs are not present in the consolidated coarser-grained sand and silt. In general, the samples containing the lowest TOC concentrations (10,000 – 30,000 mg/Kg) and having the highest percent solids measurements (50% - 80%), which would signify that the samples were obtained at least partially from the consolidated coarser-grained sand and silt, contained lower concentrations of COPCs than did samples with higher TOC levels (100,000 mg/Kg – 250,000 mg/Kg) and low percent solids measurements (10% - 20%).

This trend is more apparent in the surface sediment samples. While the concentrations of lead and arsenic in the deeper samples were highest in samples containing TOC levels of 3 percent (30,000 mg/Kg) or more, some of the deeper samples with high TOC levels did not contain lead or arsenic at concentrations above screening criteria, and one sample (BWDD0029-SD-AD-AE) had a low TOC level (2,590 mg/Kg) and elevated COPC levels.

As stated previously, SWC acknowledges that the data are not adequate to fully support the conclusion that COPCs are not present in the consolidated coarser-grained sand and silt at concentrations greater than either screening criteria or background levels, and has developed a scope of work to collect additional samples from the consolidated coarser-grained sand and silt.

#### **USEPA Bridgewood Lake Sediment Comments**

2. Table 3 – Bridgewood Lake sediment, samples BWDD0001, BWDD0002, BWDD0003, BWDD0010, BWDD0011, BWDD0023, BWDD0024, BWDD0031, BWDD0032, BWDD0036, BWDD0037, AND BWDD0042 were only sampled to 0.0-0.5 ft and had exceedances; however, no further sampling was performed to delineate the vertical extent. Additional vertical delineation sampling for Target Analyte List (TAL) Metal analysis is required for the locations cited above.

#### **SWC Response**

SWC is proposing an alternative to the USEPA's suggested vertical delineation locations. Based on the data that have been collected, it is generally understood that COPCs are present in the soft organic-rich sediment at concentrations greater than screening criteria throughout the majority of Bridgewood Lake. The primary vertical delineation question that needs to be resolved is whether or not COPCs are present in the consolidated coarser-grained sand and silt underlying the soft organic-rich sediment.

The USEPA has suggested additional sampling locations based on the observation that in these locations only a 0.0-0.5 ft. sample was collected. However, the sediment sampling in these locations was limited to only the first shallow interval because, in these locations, the thickness of the soft organic-rich sediment in these locations was the least. With the exceptions of two locations, all of USEPA's suggested locations are

at the bank of the lake (where the soft organic-rich sediment is thinnest), and will not provide information representative of the majority of the lake bottom. Therefore, SWC is suggesting that samples be collected from locations in different portions of the lake, representing locations with differing soft organic-rich sediment thicknesses, as presented in the following table and denoted with "SWC". A comparison of the USEPA's suggested locations with SWC's suggested locations is shown on Figure 3 and summarized in the table below. Note that SWC concurs with six of the USEPA's suggested 12 sampling locations and proposes seven alternate locations that will better evaluate the potential presence of COPCs in the consolidated coarser-grained sand and silt.

**Comparison of USEPA and SWC Suggested Sample Locations**

Location Proposed By	Transect No.	Boring Designation	Lake Location	Fine-Grain Thickness (ft)	Deepest Sample (ft)
EPA	BWL1	BWDD0001	Nearshore	<0.5	0.0-0.5
EPA; <b>SWC</b>	BWL1	BWDD0002	Nearshore	0.5	0.0-0.5
EPA	BWL1	BWDD0003	Nearshore	<0.5	0.0-0.5
<b>SWC</b>	BWL4	BWDD0007	Lake Center	4	1.5-2.0
EPA	BWL4	BWDD0010	Intermediate	1	0.0-0.5
EPA; <b>SWC</b>	BWL4	BWDD0011	Nearshore	0.5	0.0-0.5
<b>SWC</b>	BWL7	BWDD0017	Intermediate	3	1.5-2.0
EPA; <b>SWC</b>	BWL7	BWDD0023	Nearshore	0.5	0.0-0.5
EPA	BWL10	BWDD0024	Nearshore	0.5	0.0-0.5
<b>SWC</b>	BWL10	BWDD0028	Intermediate	1.5	0.9-1.4
EPA; <b>SWC</b>	BWL13	BWDD0031	Nearshore	1	0.0-0.5
EPA	BWL13	BWDD0032	Intermediate	0.5	0.0-0.5
<b>SWC</b>	BWL14	BWDD0035	Intermediate	2	1.3-1.8
EPA	BWL14	BWDD0036	Nearshore	0.5	0.0-0.5
EPA; <b>SWC</b>	BWL16	BWDD0037	Nearshore	0.5	0.0-0.5
<b>SWC</b>	BWL16	BWDD0039	Lake Center	3.5	1.5-2.0
EPA; <b>SWC</b>	BWL19	BWDD0042	Nearshore	1	0.0-0.5
<b>SWC</b>	BWL19	BWDD0045	Intermediate	3	1.5-2.0
<b>SWC</b>	BWL20	BWDD0047	Nearshore	2	1.0-1.5

The thickness of the fine-grained material presented for each location is an estimate, based on field notes and interpreted bottom depths. The terms "nearshore", "lake center", and "intermediate" are descriptions of the locations of the proposed samples within the lake. "Nearshore" refers to sample locations immediately adjacent to the bank of the lake; "Lake Center" refers to samples at or near the centerline of the transect in which it is located; "Intermediate" refers to samples between the lake center and the lake bank.

The suggested sample locations include all transects except for BWL21, which consisted of two nearshore samples (BWDD0052 and BWDD0053) at the up stream

portion of the lake, and encompass several different locations within the lake as well as a variety of fine-grained material thicknesses. It is most likely that this distribution of sample locations will provide a more complete assessment of the characteristics of the coarse-grained material than would the USEPA's suggested locations.

SWC will collect the deep samples using the same protocol that has been used during the Kirkwood Lake sediment sampling. The depth to the coarse-grained material will be determined using a sounding instrument. A Vibracore<sup>TM</sup> sampling device will then be used to collect a three-foot core of the coarse-grained bottom material. An XRF unit will be used to screen the core at the 0.0-0.5 ft, 1.5-2.0 ft, and 2.5-3.0 ft intervals. If no COPCs are found at concentrations exceeding screening criteria or, in the case of arsenic, background levels, only the sample from the 0.0-0.5 ft interval will be collected for laboratory analysis. If the XRF screening finds one or more COPCs at concentrations greater than screening criteria or, in the case of arsenic, background levels, the sample(s) in which COPCs are present at concentrations greater than screening criteria or, in the case of arsenic, background levels, and the sample at the next lower sample interval will be collected. For instance, if the 0.0-0.5 ft and 1.5-2.0 ft intervals both appear to be impacted, samples will be retained from these intervals and the lower 2.5-3.0 ft interval. All samples will be analyzed for TAL metals, TOC and % solids.

#### **USEPA Bridgewood Lake Sediment Comments**

3. Bridgewood Lake sediment samples BWDD0037, BWDD0040 and BWDD0053 were rejected at the 0.0-0.5 ft. interval. Additional sampling is required at the locations cited above for TAL Metal analysis at the 0.0-0.5 ft interval.

#### **SWC Response**

SWC will return to these locations to collect additional samples from the 0.0-0.5 ft. interval. However, it should be noted that the samples were rejected because of the very low percent solids, which were 8.2%, 7.2% and 7.4% for BWDD0037, BWDD0040 and BWDD0053, respectively. It is possible that replacement samples collected from these locations at the 0.0-0.5 ft intervals may also contain low solids levels and ultimately result in rejection again. As was the case during the initial investigation of Bridgewood Lake sediment, the field team will make every effort to collect samples with the highest solids content possible.

#### **USEPA Bridgewood Lake Sediment Comments**

4. A number of the Bridgewood Lake sediment samples being analyzed for cyanide were rejected. The reason for this should be provided.



### **SWC Response**

Samples BWDD0036-SD-AA-AB-0, BWDD0037-SD-AA-AB-0, BWDD0040-SD-AA-AB-0, BWDD0053-SD-AA-AB-0, and BWDD0053-SD-AA-AB-1 - were rejected because of extremely low solids content (less than 10%). Samples BWDD-44-SD-AA-AB-0, BWDD-44-SD-AA-AB-1, BWDD-45-SD-AA-AB-0, BWDD-46-SD-AA-AB-0, BWDD-47-SD-AA-AB-0, and BWDD-48-SD-AA-AB-0 were rejected because the matrix spike recovery was greater than 200%. Although sample matrix clean up was performed on these samples, acceptable recoveries could not be achieved. Both of these situations are unique to the condition of the sediment at the sample locations and resampling is unlikely to result in usable results.

### **USEPA Bridgewood Lake Soil Comments**

1. Table 2 - Bridgewood Lake soil samples BWSB0010, BWSB0015, and BWSB0016 – were collected at the 0.0-0.5 ft. interval and there were exceedances for several metals; however, no additional vertical delineation sampling was performed. Additional vertical delineation sampling for TAL Metal analysis is required at the following locations: BWSB0010, BWSB0015, and BWSB0016.

### **SWC Response**

SWC will collect deeper samples for vertical delineation from the boring locations identified by the USEPA. At each location, a sample will be initially obtained from the 1.5-2.0 ft interval and screened with an XRF unit. If the XRF screening finds no COPCs at concentrations above screening criteria or, in the case of arsenic, background levels, that sample will be collected and sent to the laboratory for analysis for TAL metals.

If the XRF screening finds COPCs present above screening criteria or, in the case of arsenic, background levels, an additional sample will be collected from the 3.5-4.0 ft interval and screened with the XRF unit. If the XRF screening finds no COPCs at concentrations above screening criteria or, in the case of arsenic, background levels, the first sample and the subsequent sample will be collected and sent to the laboratory for analysis for TAL metals. If the XRF screening in the second sample finds COPCs at concentrations greater than screening criteria or, in the case of arsenic, background levels, an additional sample will be obtained from the 5.5-6.0 ft interval and screened with the XRF unit. The screening and sample collection will continue, with samples collected from the bottom six inches of each subsequent two-foot interval, until the XRF screening finds no COPCs at concentrations greater than screening criteria or, in the case of arsenic, background levels.

### **USEPA Bridgewood Lake Soil Comments**

2. Table 2 -Bridgewood Lake soil sample BWSB0009 - was collected at the 0.0 -2.0 ft. interval and there were exceedances for arsenic; however, no additional sampling

was performed. Additional vertical delineation sampling for TAL Metal analysis is required at BWSB0009.

### **SWC Response**

SWC will collect deeper samples for vertical delineation from boring location BWSB0009. A sample will be initially obtained from the 3.5-4.0 ft interval and screened with an XRF unit. If the XRF screening finds no COPCs at concentrations above screening criteria or, in the case of arsenic, background levels, that sample will be collected and sent to the laboratory for analysis for TAL metals.

If the XRF screening finds COPCs present above screening criteria or, in the case of arsenic, background levels, an additional sample will be collected from the 5.5-6.0 ft interval and screened with the XRF unit. If the XRF screening finds no COPCs at concentrations above screening criteria or, in the case of arsenic, background levels, the first sample and the subsequent sample will be collected and sent to the laboratory for analysis for TAL metals.

The screening and sample collection will continue, with samples collected from the bottom six inches of each subsequent two-foot interval, until the XRF screening finds no COPCs at concentrations greater than screening criteria or, in the case of arsenic, background levels.

### **USEPA Bridgewood Lake Soil Comments**

3. Page 3, fourth paragraph, (Bridgewood Lake Transects) Soil and Sediment Results - Soil sample BWSB0010 is bounded to the south and southeast by Rail Road Site soil samples RRSB0002 AND RRSB0006, respectively. However, soil sample location BWSB0010 is not bounded to the southwest, along the lake's bank. The proposed sampling that will continue along the lake's front covers this lack, but the text would be more appropriate if it stated that the bounding is limited to the south and southeast.

### **SWC Response**

The comment is correct. While the COPCs found at location BWSB0010 are bounded to the north at RRSB0003, the southeast at RRSB0006, and the west at RRSB0002, there are no samples directly to the east or the southwest of BWSB0010. However, directly to the east of BWSB0010 is the former excavation area, which, as discussed in response to the "USEPA Rail Road (Site) Comments" Comment No. 1, is represented by the results from RRSB-0006, RRSB-0007, RRSB-0008, and RRSB-0009. COPCs were not found in either location at a concentration greater than screening criteria or, in the case of arsenic, background levels. Therefore, no additional delineation is needed to the east, and, as stated in the comment, the proposed sampling along the Bridgewood Lake shore will address the area to the west of BWSB-0010.

### **USEPA Bridgewood Lake Soil Comments**

4. Page 6, second paragraph, Bridgewood Lake - Although lead in the soil sample from BWSB0009 was less than 20.0 mg/kg, it is requested that the three (additionally proposed) locations be analyzed for full TAL metals and not just arsenic. The closest sediment sample to BWSB0009 had exceedances for both arsenic and lead.

### **SWC Response**

The three proposed samples, and any additional vertical and horizontal samples collected, will be analyzed for TAL metals.

Note that SWC intends to screen the initial samples with an XRF unit to determine whether the initial distance from BWSB0009 is adequate to complete delineation. If the XRF screening finds that lead is not present at concentrations greater than its screening criteria and arsenic is not present at concentrations greater than background levels, the initial samples will be collected and analyzed for lead and arsenic.

If lead is present above its screening criterion or arsenic is present above background levels in one or more samples, additional vertical and/or horizontal samples will be collected as per the following protocol:

#### **Vertical Delineation**

The initial samples will be collected from the 0.0-0.5 ft interval and screened with the XRF unit. If COPCs other than arsenic are found above screening criterion, or if arsenic is present above background levels in one or more samples, a second sample will be collected from the 1.5 – 2.0 ft interval and screened with the XRF unit. Samples will continue to be collected from the bottom six inches of each subsequent two-foot interval until the XRF screening finds COPCs at levels below its screening criterion and arsenic below background levels. All XRF-screened samples will be sent to the laboratory for analysis for TAL Metals.

#### **Horizontal Delineation**

If either or both samples collected to the northeast or southwest of BWSB0009 (between the lake and Gibbsboro-Clementon Road) contain lead at a concentration above its screening criterion or arsenic at a concentration above background levels, an additional sample will be obtained approximately 20 feet from the sample(s) in which COPCs other than arsenic were found above screening criteria or arsenic was found above background levels. These samples will also be screened with the XRF unit.

Sample collection will continue to the northeast until the results of the XRF screening do not find COPCs at concentrations greater screening criteria, or, in the case of arsenic, at a concentration above background levels. Sample collection will continue to the

southwest until the results of the XRF screening do not find COPCs at concentrations greater than screening criteria, or, in the case of arsenic, above background levels, or until location BWSB0002 is reached. At this location, all COPCs other than arsenic were present at a concentration below screening criteria, and arsenic was present at a concentration less than background levels.

It is expected that the sample that will be collected between BWSB0009 and Gibbsboro-Clementon Road will be as close to the road as possible; therefore, if the XRF screening finds lead at a concentration above its screening criterion or arsenic above background levels, it is not expected that it will be possible to collect an additional horizontal delineation sample.

The protocol used for vertical delineation of BWSB0009 will also be used to vertically delineate all locations where borings are installed for the purpose of horizontally delineating BWSB0009. The initial samples will be collected from the 0.0-0.5 ft interval and screened with the XRF unit. If COPCs are present above screening criteria, or, in the case of arsenic, background levels in one or more samples, a second sample will be collected from the 1.5 – 2.0 ft interval and screened with the XRF unit. Samples will continue to be collected from the bottom six inches of each subsequent two-foot interval until the XRF screening finds COPCs at levels below screening criteria, or, in the case of arsenic, below background levels. All XRF-screened samples will be sent to the laboratory for analysis for TAL Metals.

#### **USEPA Bridgewood Lake Soil Comments**

5. Page 6, second paragraph, Bridgewood Lake -Arsenic was detected at 14.3 mg/kg in sample location BWSB0001, at the southeastern end of BWL1. This value is above both its action level and background level. Further delineation is warranted in this area.

#### **SWC Response**

SWC will perform additional vertical and horizontal delineation at location BWSB0001, as indicated below.

#### **Vertical Delineation**

An initial vertical delineation sample will be collected from the 1.5-2.0 ft interval and screened with the XRF unit. If arsenic is present above background levels in one or more samples, a second sample will be collected from the 3.5 – 4.0 ft interval and screened with the XRF unit. Samples will continue to be collected from the bottom six inches of each subsequent two-foot interval until the XRF screening finds arsenic below background levels. All XRF-screened samples will be sent to the laboratory for analysis for arsenic.

### Horizontal Delineation

Surface samples (0.0-0.5 ft) will be collected from three initial locations approximately 10 feet from BWSB0001. Samples will be collected approximately 10 feet to the southwest and northeast of BWSB0001, along the shore of Bridgewood Lake, and one sample will be collected approximately 10 feet to the southeast of BWSB0001, perpendicular to the shore of Bridgewood Lake. The initial samples will be screened with the XRF unit. If arsenic is found at a concentration below background levels, the initial horizontal delineation samples will be collected for laboratory analysis for arsenic.

If the XRF results find that one or more samples contain arsenic at a concentration above background levels, additional horizontal delineation samples will be collected as follows:

Samples will be collected at 20-foot spacings along the shore of Bridgewood Lake until XRF screening finds that arsenic concentrations are below background levels or, to the northeast of BWSB0001, until location BWSB0003 is encountered. BWSB0003 did not contain arsenic above background levels and will be used as an outer delineation point if necessary.

Samples will be collected at 10-foot spacings southeast of BWSB0001, perpendicular to the shore of Bridgewood Lake, until XRF screening finds that arsenic is present at a concentration less than background levels.

All samples will be collected for laboratory analysis for arsenic.

The same protocol used to vertically delineate BWSB0001 will be used to vertically delineate each boring installed to horizontally delineate BWSB0001. If the XRF screening finds arsenic at a concentration above background levels in the 0.0-0.5 ft interval, a sample will be collected from the 1.5-2.0 ft interval and screened with the XRF unit. Sample collection and XRF screening will continue until the XRF results find arsenic at a concentration below background levels. All samples collected and screened will be sent to the laboratory for analysis for arsenic.

### USEPA Bridgewood Lake Surface Water Comment

Table 4A -According to the table headers, the tables are for "hits only". However, there are analytes present on the tables that do not appear to have been detected in the associated samples. For example, there are nine SVOCS listed on Table 4A, but only two of them had occurrence concentrations in the dry event surface water sample operations.

### SWC Response

The comment is correct. Only two SVOCs were found in surface water during the dry sampling event, and no SVOCs were found in surface water during the wet sampling

event at concentrations greater than the method detection limit, but the results were provided in Tables 4A and 4B. Similarly, no volatile organic compounds were detected during either sampling event, but the results were provided in Table 4A.

#### **USEPA Rail Road (Site) Soil Comments**

1. As the "former excavation area" is referenced in the text, it would be beneficial to have the limits of the excavation depicted on the figures.

The 0.0 -0.5 ft interval (for soil) was not sampled at sample locations and RRSB0006 and RRSB0007. Without a figure which depicts the location of the former removal activities, it is difficult to discern whether or not these samples were collected from within the "footprint" of the former rail road site. However, soil samples RRSB0003 and RRSB0010 were both collected in close proximity to these samples and had exceedances at the 0.0 -0.5 ft. interval. The "newly" proposed Bridgewood Lake sample should be placed somewhere in the vicinity between these four sample locations.

#### **SWC Response**

Figure 2 presents the sample locations with respect to the limits of the excavation. As shown, both RRSB0006 and RRSB0007 were collected within the limits of the excavation and were, as originally specified in the approved Work Plan, "bottom borings".

As presented on Figure 2, none of the samples collected from the four borings within the former excavation area (RRSB0006, RRSB0007, RRSB0008, RRSB0009) contained COPCs at concentrations greater than screening criteria, or, in the case of arsenic, background levels.

It is assumed that USEPA's comment refers to BWSB0010 not RRSB0010. RRSB0003 and BWSB0010 were collected immediately outside the western perimeter of the former excavation area. Therefore, collection of additional samples between RRSB0003 and BWSB0010 and samples within the former excavation area (RRSB0006 and RRSB0007) will provide no additional information regarding COPCs in this area..

The proposed additional Bridgewood Lake sample locations are those presented in the approved Work Plan and are outside of the limits of the excavation.

#### **USEPA Rail Road (Site) Soil Comments**

2. Page 2, first paragraph, Rail Road Site Soil Sampling Results -Four locations in U.S. Avenue (RRSB-0011, RRSB-0012, RRSB-0013, and RRSB-0015) are listed as having concentrations above screening criteria. However, boring RRSB0016 also contained concentrations of arsenic above both its action level and background level, at 8.4 mg/kg from 3.0 -3.5 feet.

### **SWC Response**

The comment is correct. The arsenic concentration in RRSB0016 at the 3.0-3.5 ft interval, 8.4 mg/Kg, is greater than the background concentration of 8 mg/Kg. No additional delineation is proposed for this location, however, since the concentration approaches background levels.

### **USEPA Rail Road (Site) Soil Comments**

3. Pages 2 to 3, first paragraph, Rail Road Site Soil Sampling Results -It is stated in the text, that the borings in the vicinity of the roadway contained exceedances between 3.0 - 4.0 feet, while the samples adjacent to Bridgewood Lake were in the 0.0 -0.5 feet interval. Please clarify the purpose of this statement/comparison. The locations around Bridgewood Lake were not sampled at depths below 0.5 feet.

### **SWC Response**

The statement was not a comparison of the results from Bridgewood Lake and the Rail Road Site. Rather, it was a factual statement that provided the depths at which the lead and arsenic were found in the individual samples cited in the beginning of the paragraph. It is acknowledged that the soil samples collected along the perimeter of Bridgewood Lake were collected only from the 0.0-0.5 ft interval; this was the sampling interval obtained by following the sample selection procedures in the Work Plan.

### **USEPA Rail Road (Site) Soil Comments**

4. Table 1 -Rail road site soil sample RRSB0004 was collected at the 0.0-0.5 ft interval and there were exceedances for several metals; however, no further vertical delineation sampling was performed. Additional vertical delineation sampling for TAL Metals analysis is required at RRSB0004.

### **SWC Response**

SWC will perform additional vertical delineation at location RRSB0004 where lead was found at a concentration (616 mg/Kg) greater than its screening criterion (400 mg/Kg) and arsenic was found at a concentration (13.9 mg/Kg) greater than background levels (8 mg/Kg).

An initial vertical delineation sample will be collected from the 1.5-2.0 ft interval and screened with the XRF unit. If COPCs are present above screening criteria, or, in the case of arsenic, background levels in one or more samples, a second sample will be collected from the 3.5 – 4.0 ft interval and screened with the XRF unit. Samples will continue to be collected from the bottom six inches of each subsequent two-foot interval until the XRF screening finds concentration of all COPCs below screening criteria or, in

the case of arsenic, background levels. All XRF-screened samples will be sent to the laboratory for analysis for TAL Metals.

#### **USEPA Rail Road (Site) Soil Comments**

5. Page 7, last bullet Rail Road Site, and Street Borings first paragraph -It is stated within the text that "samples collected from the location immediately east of these locations....did not contain constituents at levels greater than screening criteria." First, see the general comment (above) as to whether or not this includes background levels. Second, arsenic and lead were above criteria (action levels and/or background) in RRSB0015 (3.5 -4.0 feet) and arsenic was above criteria (action levels and/or background) in RRSB0016 (3.0 -3.5 feet). Both of these locations are in the eastern-most line in U.S. Avenue. Additional boring locations may be necessary to the east to further delineate under the roadway, unless sufficient information is obtained from the borings on the U.S. Avenue Burn Site.

#### **SWC Response**

The USEPA comment is correct. In the 3.5-4.0 ft interval, RRSB0015 contained lead at a concentration above its screening criterion (410 mg/Kg v. 400 mg/Kg) and arsenic above background levels (10.9 mg/Kg v. 8 mg/Kg) while the 3.0-3.5 ft interval in RRSB0016 contained arsenic at a concentration greater than background levels (8.4 mg/Kg v. 8 mg/Kg).

Despite the comment, however, SWC maintains that it is unnecessary to continue the boring program beneath U.S. Avenue. As shown, the concentrations of lead approach the screening criteria and the concentrations of arsenic approach background levels. Although not screening criteria for the purposes of this investigation, it should be noted that the arsenic concentrations are less than the New Jersey residential cleanup criteria, and the lead concentrations are less than the New Jersey non-residential cleanup criteria. Given that these samples are beneath U.S. Avenue, installation of additional borings and collection of additional samples will provide no additional decision relevant information.

#### **USEPA Rail Road (Site) Soil Comments**

6. Page 7, last bullet, Rail Road Site -The term "slightly" in the fourth sentence is not clear and should be defined. Lead and arsenic values ranged up to 593 mg/kg and 25.1 respectively, in the samples from beneath the roadway.

#### **SWC Response**

The term was a subjective qualifier, and, as such, should not have been included in the response. Note however, that, despite the qualifier, additional sampling was proposed to delineate the identified constituents.



### **USEPA Rail Road (Site) Soil Comments**

7. Page 7, first paragraph, Bottom Borings - The proposed boring that would be "immediately" west of the locations where lead and arsenic were found beneath U.S. Avenue "appears to be too far south on Figure 6 to classify as "immediately" west of these borings. The location should be placed either in line with RRSB0011/RRSB0015 or between 11 and RRSB0012.

### **SWC Response**

Revised Figure 6 presents the revised location, midway between RRSB0011 and RRSB0012.

### **NJDEP COMMENTS**

#### **NJDEP Deficiency:**

1. Sherwin-Williams failed to propose complete horizontal delineation of contaminants found at the site, in accordance with N.J.A.C. 7:26E-4.1(a) and (b). More specifically, Sherwin-Williams failed to delineate and failed to propose further delineation for lead contamination noted at sample location BWDD0014 where lead (Pb) contamination was noted at its highest sediment concentration within Bridgewood Lake.

#### **Corrective Action:**

Additional delineation samples are to be taken within the wetland area southeast of sediment sample BWDD0014 and along the banks to the northeast and southwest of this sample location.

### **SWC Response**

As presented on revised Figure 6, SWC is proposing an additional sediment sampling boring within the marsh area and two additional soil sampling location at the shore of Bridgewood Lake.

#### **NJDEP Deficiency:**

2. Sherwin-Williams failed to propose complete vertical delineation of contaminants found at the site, in accordance with N.J.A.C. 7:26E-4.1(a) and (b). More specifically, Sherwin-Williams failed to delineate and failed to propose further delineation for TAL metal concentrations in sediments throughout the Bridgewood Lake which are highly elevated, especially lead and arsenic, to the maximum collection depth (generally 2 feet).

**Corrective Action:**

Additional samples are to be obtained from within the lake sediment and analyzed for the appropriate parameters in order to fully delineate the vertical extent of the contamination.

**SWC Response**

Additional samples will be collected to address this item - see response to USEPA "Bridgewood Lake Sediment Comments" Comment No. 2.

**NJDEP Deficiency:**

3. The laboratory analysis failed to conduct sample matrix cleanup methods in accordance with N.J.A.C 726E-2.1(a)9i when method detection limits for semivolatile organics and volatile organics were elevated above applicable remediation standards.

**Corrective Action:**

Sherwin-Williams is to re-sample, re-analyze and if necessary conduct sample matrix cleanup on samples where the method detection limits for semivolatile and volatile organic compounds exceeded remediation standards or screening criteria.

**SWC Response**

SWC understands the comment. However, to the best of our knowledge a matrix clean up method for VOC analysis does not exist. In addition, SWC completed a random review of the supporting QA/QC packages associated with the samples. Gel Permeation Calibration (GPC) clean up was performed on SVOC, pesticide, and PCB analyses required by OLM 4.2 and SW-836 Method 8082. Based on our review of the data set the elevated detection limits were a direct result of the low percent solids associated with the sediment samples. This issue was evaluated and discussed with USEPA prior to beginning the sediment investigation, but no mechanism to resolve this issue was found. The field team has made every effort to collect sediment samples with the highest levels of solids possible, but the soft organic-rich sediment that is found throughout the lake contains very low levels of solids.

**NJDEP Deficiency:**

4. Sherwin-Williams has failed to reference the citation for the "Action Levels" used in Tables 1 through 3 as required pursuant to N.J.A.C. 7:26E-4.7. It is assumed that the criteria used for soil data are the human health-based NJDEP Soil Clean-up Criteria (SCCs). However, this requires clarification.

**Corrective Action:**

The citation for the "Action Levels" used in Tables 1 through 3 need to be provided. Clarification regarding the criteria/citation used for soil data is also to be provided. If the perimeter soils in riparian areas surrounding Bridgewood Lake represent an ecological exposure area, ecological risk-based soil screening criteria are also to be used as a basis of comparison on appropriate tables and figures.

**SWC Response**

The Action Levels cited in the text are those proposed to the USEPA in November 2004. These action levels have been used for purposes of delineating COPCs at each of the Gibbsboro site. As proposed to the USEPA, the Action Levels are:

Soil (floodplain and upland areas)	Compared to the strictest of NJDEP unrestricted use criteria (UUC) or USEPA Region 9 Preliminary Remediation Goals (PRGs) <sup>1</sup>
Sediment (stream and reservoir)	Compared to NJDEP Lowest Effect Level (LEL) <sup>2</sup>
Groundwater	Compare to NJDEP II-A Groundwater Quality Standards (GWQS) <sup>3</sup>

SWC acknowledges that in some locations there is a possibility of both human and ecological receptors. These will be evaluated in the risk assessment; however, for purposes of COPC delineation, these criteria are considered adequate.

**NJDEP Additional Comment:**

Groundwater samples indicate that arsenic was found at concentrations ranging from 4.8 to 8 ug/l. Since the Department's current groundwater standard is 8 ug/l, these wells will require further monitoring.

**SWC Response**

SWC acknowledges that additional ground water monitoring and investigation will need to be conducted at the Gibbsboro sites.

As discussed at the October 25, 2007 EPA/Sherwin-Williams Gibbsboro project meeting, based on the results of the 2005 sampling effort in Bridgewood Lake, the additional sampling proposed herein will be necessary to better characterize the lake, however the full scope outlined in the 2003 Work Plan is not warranted at this time.

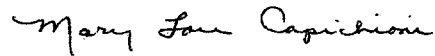
<sup>1</sup> NJDEP Soil Cleanup Criteria (last revised 5/12/99) from the proposed rule entitled Cleanup Standards For Contaminated Sites (N.J.A.C. 7:26D).

<sup>2</sup> NJDEP Guidance for Sediment Quality Evaluations (November 1998)

<sup>3</sup> NJDEP proposed Ground Water Quality Standards as promulgated in the New Jersey Register on 3 February 2003 (proposed N.J. A.C. 7:26-1.13)

Should you have any comments or questions, please do not hesitate to contact me at (216) 566-1794 or via e-mail at [mlcapichioni@sherwin.com](mailto:mlcapichioni@sherwin.com). We hope to start our sampling program in Kirkwood Lake as soon as possible.

Sincerely,



Mary Lou Capichioni  
Director Remediation Services

Attachment

cc: Jeff Josephson, USEPA-Reg.2  
Mindy Pensak, USEPA-Reg.2  
William Sy, USEPA-Reg.2  
Clay Stern, USFWS  
Diane Wehner, NOAA  
John Doyon, NJDEP (4 copies)  
Lynn Arabia, TetraTech ECI  
John Gerulis, SWC  
Allen Danzig, Esq., SWC  
Susanne Peticolas, Esq., Gibbons P.C.  
Sally Jones, Weston  
Hank Martin, ELM

Table 1  
Comparison of Total Organic Carbon, Percent Solids, Arsenic Concentrations and Lead Concentrations  
Surface Sediment Samples, Bridgewood Lake

Sample	TOC (mg/Kg)	As (mg/Kg)	Pb (mg/Kg)	% Solid	Qualifier
BWDD0001-SD-AA-AB-0	28,900	31.1	1	37.8	"R" - Pb
BWDD0002-SD-AA-AB-0	45,000	55	178	33.1	
BWDD0003-SD-AA-AB-0	19,500	11.2	0.8	53.5	"R" - Pb
BWDD-0004-SD-AA-AB-0	82,200	300	1650	21.8	
BWDD0005-SD-AA-AB-0	146,000	332	1950	11.8	
BWDD0006-SD-AA-AB-0	162,000	546	2640	11.5	
BWDD0007-SD-AA-AB-0	188,000	333	2450	12.3	
BWDD0008-SD-AA-AB-0	179,000	524	3450	13.5	
BWDD0009-SD-AA-AB-0	168,000	247	2670	16.1	
BWDD0010-SD-AA-AB-0	67,500	74	680	26.6	
BWDD0011-SD-AA-AB-0	53,100	89.4	402	32	
BWDD0012-SD-AA-AB-0	98,100	50.6	1490	19.8	
BWDD0013-SD-AA-AB-0	187,000	101	2590	13.1	
BWDD0014-SD-AA-AB-0	284,000	120	5840	10.8	
BWDD0015-SD-AA-AB-0	71,400	116	571	26.4	
BWDD0015-SD-AA-AB-1	77,800	147	778	23.6	
BWDD0016-SD-AA-AB-0	161,000	385	2140	12.3	
BWDD0017-SD-AA-AB-0	130,000	470	2740	15.4	
BWDD0018-SD-AA-AB-0	151,000	1070	4810	13	
BWDD0019-SD-AA-AB-0	153,000	445	3100	16.1	
BWDD0020-SD-AA-AB-0	149,000	413	3070	14.3	
BWDD0021-SD-AA-AB-0	157,000	359	2120	12.8	
BWDD0022-SD-AA-AB-0	21,200	24.4	136	55.5	
BWDD0023-SD-AA-AB-0	21,100	15.7	128	55	
BWDD0024-SD-AA-AB-0	43,200	37.8	139	32	
BWDD0025-SD-AA-AB-0	136,000	400	2620	19.1	
BWDD0026-SD-AA-AB-0	155,000	356	2900	16.9	
BWDD0027-SD-AA-AB-0	138,000	180	932	14.7	
BWDD0028-SD-AA-AB-0	121,000	110	665	21.4	
BWDD0029-SD-AA-AB-0	181,000	666	2470	14	
BWDD0030-SD-AA-AB-0	156,000	384	1270	15.5	
BWDD0031-SD-AA-AB-0	118,000	152	507	16.3	
BWDD0032-SD-AA-AB-0	3,610	2.3	7	83.5	
BWDD0033-SD-AA-AB-0	249,000	148	1060	10.9	
BWDD0033-SD-AA-AB-1	245,000	200	1890	11.9	
BWDD0034-SD-AA-AB-0	146,000	189	1240	17.3	
BWDD0035-SD-AA-AB-0	193,000	298	2000	14.4	
BWDD0036-SD-AA-AB-0	279,000	267	933	9.7	
BWDD0037-SD-AA-AB-0	6,100	14.1	6	8.2	R
BWDD0038-SD-AA-AB-0	167,000	338	2170	16.4	
BWDD0039-SD-AA-AB-0	185,000	284	1760	14.7	
BWDD0040-SD-AA-AB-0	6,940	13.4	5.7	7.2	R
BWDD0041-SD-AA-AB-0	215,000	287	1970	13.4	
BWDD0042-SD-AA-AB-0	141,000	343	693	17.1	
BWDD0043-SD-AA-AB-0	255,000	440	1210	13.8	
BWDD0044-SD-AA-AB-0	147,000	182	703	22.7	
BWDD0044-SD-AA-AB-1	179,000	224	804	20.9	

Table 1  
Comparison of Total Organic Carbon, Percent Solids, Arsenic Concentrations and Lead Concentrations  
Surface Sediment Samples, Bridgewood Lake

Sample	TOC (mg/Kg)	As (mg/Kg)	Pb (mg/Kg)	% Solid	Qualifier
BWDD0045-SD-AA-AB-0	186,000	484	1560	14.9	
BWDD0046-SD-AA-AB-0	194,000	232	1890	11.6	
BWDD0047-SD-AA-AB-0	115,000	470	2110	22.3	
BWDD0048-SD-AA-AB-0	171,000	264	1180	15.3	
BWDD0049-SD-AA-AB-0	166,000	401	1360	15.6	
BWDD0050-SD-AA-AB-0	162,000	219	2040	16.9	
BWDD0051-SD-AA-AB-0	145,000	137	645	16.4	
BWDD0052-SD-AA-AB-0	202,000	265	1420	12.2	
BWDD0053-SD-AA-AB-0	6,760	14.5	6.1	7.4	R
BWDD0053-SD-AA-AB-1	6,020	13	5.5	8.3	R
BWDD0056-SD-AA-AB-0	32,800	64	443	56.4	
BWDD0057-SD-AA-AB-0	28,400	63.4	464	61.7	
BWDD0058-SD-AA-AB-0	1,480	2.2	4.7	85.5	
BWDD0059-SD-AA-AB-0	30,500	83.4	354	48.1	
BWDD0060-SD-AA-AB-0	24,200	45.7	162	56.8	

Table 2  
Comparison of Total Organic Carbon, Percent Solids, Arsenic Concentrations and Lead Concentrations  
Deeper Sediment Samples, Bridgewood Lake

Sample ID	Depth (ft)	TOC (mg/Kg)	As (mg/Kg)	Pb (mg/Kg)	% Solids
BWDD0004-SD-AD-AE-0	1.5	75,000	131	262	32.8
BWDD0005-SD-AD-AE-0	1.5	184,000	23.8	64.5	23.2
BWDD0006-SD-AG-AH-0	3	213,000	18.5	3.6	23.3
BWDD0007-SD-AD-AE-0	1.5	454,000	9.4	3.3	12.2
BWDD0008-SD-AD-AE-0	1.5	75,800	2.2	1.2	45
BWDD0009-SD-AC-AD-0	1.3	91,900	68.2	203	35.1
BWDD0012-SD-AD-AE-0	1.5	6,700	3.2	63.8	76.2
BWDD0013-SD-AF-AG-0	2.9	16,200	8.9	139	65
BWDD0014-SD-AD-AE-0	1.5	80,100	25.1	558	31.6
BWDD0016-SD-AD-AE-0	1.5	149,000	14.9	91.4	37.1
BWDD0017-SD-AD-AE-0	1.5	450,000	24.4	100	13.8
BWDD0018-SD-AD-AE-0	1.5	217,000	10.4	2.1	22.6
BWDD0018-SD-AD-AE-1	1.5	128,000	7.9	2.7	29.3
BWDD0019-SD-AC-AD-0	1.4	190,000	7.7	5.6	28.6
BWDD0020-SD-AF-AG-0	2.5	31,600	22.9	7	63.9
BWDD0021-SD-AD-AE-0	1.5	43,100	3.6	4.8	66.1
BWDD0022-SD-AB-AC-0	0.6	6,870	1.1	4.8	78.7
BWDD0025-SD-AF-AG-0	2.7	65,300	2.7	3.1	48.3
BWDD0026-SD-AD-AE-0	1.5	94,300	3	5.2	45.6
BWDD0027-SD-AD-AE-0	1.5	25,200	24.9	13.7	51.8
BWDD0028-SD-AB-AC-0	0.9	56,500	117	2800	48.5
BWDD0029-SD-AD-AE-0	1.5	2,590	128	310	64.5
BWDD0030-SD-AD-AE-0	1.5	234,000	314	919	19.9
BWDD0034-SD-AB-AC-0	0.8	32,500	179	943	44.9
BWDD0035-SD-AC-AD-0	1.3	32,900	377	890	40.7
BWDD0038-SD-AI-AJ-0	4.1	116,000	8	43.2	33.1
BWDD0039-SD-AD-AE-0	1.5	36,700	459	2150	48.7
BWDD0040-SD-AC-AD-0	1.3	56,300	87.8	656	49.5
BWDD0041-SD-AC-AD-0	1	71,600	24.5	67.7	38.2
BWDD0043-SD-AI-AJ-0	4.3	67,000	20.2	86.6	50
BWDD0044-SD-AD-AE-0	1.5	161,000	142	1130	25
BWDD0045-SD-AD-AE-0	1.5	168,000	604	2350	14.3
BWDD0046-SD-AC-AD-0	1	183,000	525	2620	11.9
BWDD0047-SD-AC-AD-0	1	149,000	675	3740	24.5
BWDD0048-SD-AD-AE-0	1.5	101,000	326	1640	25.3
BWDD0049-SD-AB-AC-0	0.5	30,500	78.5	570	50.9
BWDD0050-SD-AE-AF-0	2.4	126,000	236	1600	22.4
BWDD0051-SD-AD-AE-0	1.5	163,000	64.4	270	16.8
BWDD0052-SD-AC-AD-0	1	63,500	402	1650	33.5
BWDD0053-SD-AC-AD-0	1	4,240	19.7	129	72.1
BWDD0056-SD-AD-AE-0	1.5	11,900	22.4	371	71.3
BWDD0057-SD-AD-AE-0	1.5	51,000	147	648	38.1
BWDD0058-SD-AC-AD-0	1	2,000	4.5	19.3	84.5
BWDD0059-SD-AD-AE-0	1.5	14,400	33.8	166	63.6
BWDD0060-SD-AD-AE-0	1.5	17,500	37.1	135	62.7